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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/704,724	11/03/2000	Yoshiharu Sasaki	Q61576	7226

7590 06/16/2005
 Sughrue Mion Zinn Macpeak & Seas PLLC
 2100 Pennsylvania Avenue NW
 Washington, DC 20037-3213

EXAMINER

POKRZYWA, JOSEPH R

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/704,724

Applicant(s)

SASAKI ET AL.

Examiner

Joseph R. Pokrzywa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 2/7/05, and has been entered and made of record. Currently, **claims 1-11** are pending.

Response to Arguments

2. Applicant's arguments, see pages 6-9, filed 2/7/05, with respect to the rejection(s) of **claims 1-4** under 35 U.S.C. 103(a) as being unpatentable over Bolash (U.S. Patent Number 5,940,093), and **claims 5-8** under 35 U.S.C. 103(a) as being unpatentable over Bolash in view of Herwald (U.S. Patent Number 6,695,426) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kakutani *et al.* (U.S. Patent Number 6,356,358).

Claim Objections

3. **Claim 4** is objected to because of the following informalities:

In **claim 4**, line 4, "downstairs" should read "downstream".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-11** are rejected under 35 U.S.C. 102(e) as being anticipated by Kakutani *et al.* (U.S. Patent Number 6,356,358).

Regarding **claim 1**, Kakutani discloses a recording method (see abstract) comprising providing a recording head which projects a plurality of recording spots on a recording medium (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), and recording, by the projected recording spots, a plurality of colors on the recording medium in both a main scanning direction and a sub-scanning direction perpendicular to the main scanning direction (column 3, line 25-column 4, line 56), wherein the recording step includes offsetting, either upstream or downstream, in the sub-scanning direction, a start position for recording one of at least two colors in the sub-scanning direction (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55), and further wherein an amount of the offsets is within the range from one spot to the number defined such that total number of spots in the sub-scanning direction subtracts one spot (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55, and column 16, lines 48-53).

Regarding **claim 2**, Kakutani discloses a recording method (see abstract) comprising providing a recording head which projects a plurality of recording spots on a recording medium (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), and recording, by the projected

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recording spots, a plurality of colors on the recording medium in both a main scanning direction and a sub-scanning direction perpendicular to the main scanning direction (column 3, line 25-column 4, line 56), wherein the plurality of colors to be recorded are four colors black, cyan, magenta, and yellow (column 6, line 35-column 7, line 18), wherein the step of recording includes offsetting, either upstream or downstream, in the sub-scanning direction (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55), a start position of each color, for recording by the recording head in the sub-scanning direction, is different from one another within a range from one spot to a number defined such that total number of spots in the sub-scanning direction subtracts one spot (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55, and column 16, lines 48-53).

Regarding *claim 3*, Kakutani discloses the method discussed above in claim 2, and further teaches that a start position for recording a first one of the plurality of colors is offset substantially by one spot (see Fig. 26), a start position for recording a second one of the plurality of colors is offset substantially by two spots (see Figs. 7A and 8A), and a start position for recording a third one of the plurality of colors is offset substantially by three spots (see Figs. 18 and 19).

Regarding *claim 4*, Kakutani discloses the method discussed above in claims 1-3, and further teaches that the step of recording includes offsetting the projected spots, in correspondence with image data to be projected in the sub-scanning direction, by same amount in an opposite direction of the respective start position which is offset either *downstream* or upstream in the sub-scanning direction (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55).

Regarding *claim 5*, Kakutani discloses a recording apparatus (see Figs. 1-6) comprising a recording head having a plurality of recording elements arranged in a two-dimensional pattern having both a main scanning direction and an sub-scanning direction perpendicular to the main scanning direction (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), the recording head being configured to record a plurality of colors on a recording medium with spots that key image information to the respective recording elements (column 6, line 35-column 7, line 31), and a controller which controls the recording head so as to implement the recording method recited in claim 1 (column 6, lines 35-62, and column 8, lines 9-67).

Regarding *claim 6*, Kakutani discloses a recording apparatus (see Figs. 1-6) comprising a recording head having a plurality of recording elements arranged in a two-dimensional pattern having both a main scanning direction and an sub-scanning direction perpendicular to the main scanning direction (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), the recording head being configured to record a plurality of colors on a recording medium with spots that key image information to the respective recording elements (column 6, line 35-column 7, line 31), and a controller which controls the recording head so as to implement the recording method recited in claim 2 (column 6, lines 35-62, and column 8, lines 9-67).

Regarding *claim 7*, Kakutani discloses a recording apparatus (see Figs. 1-6) comprising a recording head having a plurality of recording elements arranged in a two-dimensional pattern having both a main scanning direction and an sub-scanning direction perpendicular to the main scanning direction (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), the recording head being configured to record a plurality of colors on a recording medium with spots that key image information to the respective recording elements (column 6, line 35-column 7, line 31),

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and a controller which controls the recording head so as to implement the recording method recited in claim 3 (column 6, lines 35-62, and column 8, lines 9-67).

Regarding *claim 8*, Kakutani discloses a recording apparatus (see Figs. 1-6) comprising a recording head having a plurality of recording elements arranged in a two-dimensional pattern having both a main scanning direction and an sub-scanning direction perpendicular to the main scanning direction (see Figs. 2, 5A, and 5B, column 2, line 51-column 5, line 17), the recording head being configured to record a plurality of colors on a recording medium with spots that key image information to the respective recording elements (column 6, line 35-column 7, line 31), and a controller which controls the recording head so as to implement the recording method recited in claim 4 (column 6, lines 35-62, and column 8, lines 9-67).

Regarding *claim 9*, Kakutani discloses the method discussed above in claim 1, and further teaches that a start position for one of the plurality of colors is offset relative to each of the other plurality of colors (see Figs. 7A, 7B, and 26, column 11, lines 6-column 12, line 55).

Regarding *claim 10*, Kakutani discloses the method discussed above in claim 9, and further teaches that the offset between colors is less than 50 micrometers (column 1, lines 19-60, and column 9, line 46-column 10, line 24, whereby a resolution D of 720 dpi yields an offset of approximately 35 micrometers, as seen in Fig. 26, which is less than 50 micrometers).

Regarding *claim 11*, Kakutani discloses the method discussed above in claim 2, and further teaches that the recording head comprises a laser printer head (column 28, line 29-column 29, line 16, whereby a laser print head would be included in “any recording apparatuses that use a recording head having plural arrays of dot-forming elements”).

Citation of Pertinent Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Kurachi (U.S. Patent Number 6,388,690) discloses a thermal recording apparatus that prints a plurality of colors in a main scanning and a sub-scanning direction;

Sugishima (U.S. Patent Number 6,318,830) discloses an image printing apparatus that offsets the start position in the sub-scan direction; and

Shimizu *et al.* (U.S. Patent Number 6,191,805) discloses an optical printer head that prints an array of dots.

Conclusion

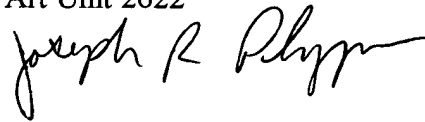
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Pokrzywa whose telephone number is (571) 272-7410. The examiner can normally be reached on Monday-Friday, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph R. Pokrzywa
Primary Examiner
Art Unit 2622



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